

Application No.: 10/600,948
Amendment Dated: June 29, 2007
Reply to Office Action Dated: June 7, 2007

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

1.-20. (cancelled)

21. (previously presented) A transgenic plant comprising in its genome a transgene encoding a Flowering Locus C2 (FLC2) gene, the transgene coding for a polypeptide comprising SEQ ID NO:4, wherein expression of the transgene causes a delay in the onset of flowering in the transgenic plant compared to non-transgenic plants of the same species.

22. (previously presented) A seed of the transgenic plant of claim 21, wherein the seed comprises the transgene.

23. (currently amended) A seed for a transgenic plant, the seed comprising in its genome a transgene comprising a plant expressible promoter and an antisense coding region complementary to a protein coding region for a plant Flowering Locus C2 (FLC2) protein, the plant FLC2 protein (i) having a MADS box domain, (ii) being at least 70% identical in amino acid sequence to SEQ ID NO:4, outside of the region of the MADS box domain, and (iii) effective when expressed in transgenic plants to cause a delay in the onset of flowering in the transgenic plant as compared to a non-transgenic plant of the same genetic background.

24. (previously presented) A plant grown from the seed of claim 23.

25. (previously presented) An isolated nucleotide sequence comprising a coding sequence for a FLC2 gene, wherein the coding sequence is defined by SEQ ID NO:3.

26. (previously presented) An isolated DNA sequence comprising a DNA sequence encoding the FLC2 protein, wherein the FLC2 protein is defined by SEQ ID NO:4.

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27. (currently amended) A genetic construction comprising a plant expressible promoter operably connected to an isolated protein coding sequence for a protein of the Flowering Locus C2 (FLC2) gene, the plant FLC2 protein (i) having a MADS box domain, (ii) being at least 70% identical in amino acid sequence to SEQ ID NO:4, and (iii) effective when expressed in transgenic plants to cause a delay in the onset of flowering in the transgenic plant as compared to a non-transgenic plant of the same genetic background.

28. (cancelled)

29. (currently amended) A transgenic plant comprising a transgene encoding a member of the plant Flowering Locus C2 (FLC2) protein, the plant FLC2 protein (i) having a MADS box domain, (ii) being at least 70% identical in amino acid sequence to SEQ ID NO:4, and (iii) effective when expressed in transgenic plants to cause a delay in the onset of flowering in the transgenic plant as compared to a non-transgenic plant of the same genetic background.

30. (currently amended) A method of producing a transgenic plant with altered flowering characteristics comprising: contacting a plant cell with a transgene comprising a plant expressible promoter and a protein coding sequence encoding a plant Flowering Locus C2 (FLC2) gene protein, the plant FLC2 protein (i) having a MADS box domain, (ii) being at least 70% identical in amino acid sequence to SEQ ID NO:4, and (iii) effective when expressed in transgenic plants to cause a delay in the onset of flowering in the transgenic plant as compared to a non-transgenic plant of the same genetic background; identifying a plant cell carrying the inserted transgene; regenerating a transgenic plant from the plant cell, wherein the transgenic plant exhibits at least about 10% more leaves than a non-transgenic plant of the same genetic background without the transgene, wherein the number of leaves is determined when the transgenic plant and the non-transgenic plant are being grown under the same conditions.

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31. (new) A seed for a transgenic plant, the seed comprising in its genome a transgene comprising a plant expressible promoter and an antisense coding region complementary to a protein coding region for a plant Flowering Locus C2 (FLC2) protein, the plant FLC2 protein (i) having a MADS box domain, (ii) being at least 95% identical in amino acid sequence to SEQ ID NO:4, outside of the region of the MADS box domain, and (iii) effective when expressed in transgenic plants to cause a delay in the onset of flowering in the transgenic plant as compared to a non-transgenic plant of the same genetic background.

32. (new) A plant grown from the seed of claim 31.

33. (new) A genetic construction comprising a plant expressible promoter operably connected to an isolated protein coding sequence for a protein of the Flowering Locus C2 (FLC2) gene, the plant FLC2 protein (i) having a MADS box domain, (ii) being at least 95% identical in amino acid sequence to SEQ ID NO:4, and (iii) effective when expressed in transgenic plants to cause a delay in the onset of flowering in the transgenic plant as compared to a non-transgenic plant of the same genetic background.

34. (new) A transgenic plant comprising a transgene encoding a member of the plant Flowering Locus C2 (FLC2) protein, the plant FLC2 protein (i) having a MADS box domain, (ii) being at least 95% identical in amino acid sequence to SEQ ID NO:4, and (iii) effective when expressed in transgenic plants to cause a delay in the onset of flowering in the transgenic plant as compared to a non-transgenic plant of the same genetic background.

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35. (new) A method of producing a transgenic plant with altered flowering characteristics comprising: contacting a plant cell with a transgene comprising a plant expressible promoter and a protein coding sequence encoding a plant Flowering Locus C2 (FLC2) gene protein, the plant FLC2 protein (i) having a MADS box domain, (ii) being at least 95% identical in amino acid sequence to SEQ ID NO:4, and (iii) effective when expressed in transgenic plants to cause a delay in the onset of flowering in the transgenic plant as compared to a non-transgenic plant of the same genetic background; identifying a plant cell carrying the inserted transgene; regenerating a transgenic plant from the plant cell, wherein the transgenic plant exhibits at least about 10% more leaves than a non-transgenic plant of the same genetic background without the transgene, wherein the number of leaves is determined when the transgenic plant and the non-transgenic plant are being grown under the same conditions.